

U.S. Application No. 09/672,328
Amendment dated February 23, 2004
Reply to Office Action dated October 22, 2003

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A modified pigment product comprising a pigment having attached a) at least one steric group and b) at least one organic ionic group and at least one amphiphilic counterion, wherein said amphiphilic counterion has a charge opposite to that of said organic ionic group, and wherein said pigment comprises a blue pigment, black pigment, white pigment, brown pigment, cyan pigment, green pigment, violet pigment, magenta pigment, red pigment, yellow pigment, orange pigment, shades thereof, or a combination thereof.

Claim 2 (currently amended): The modified pigment product of claim claims 1, wherein said steric group comprises the formula:

$-X-Sp-[N\text{Ion}]_p R$

wherein X is attached to the pigment and comprises at least an arylene group or at least an alkylene group, Sp represents a spacer group, N\text{Ion} comprises at least one type of non-ionic group, R is hydrogen or comprises an aromatic group or an alkyl group, and p represents an integer of from 1 to 500.

Claim 3 (original): The modified pigment of claim 2, wherein N\text{Ion} is a C₁-C₁₂ alkyl group or a C₁-C₁₂ alkylene oxide group.

Claim 4 (original): The modified pigment product of claim 2, wherein said non-ionic group further comprises a functional group.

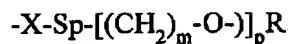
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Claim 5 (original): The modified pigment product of claim 2, wherein said non-ionic group is a glycol group.

Claim 6 (original): The modified pigment product of claim 2, wherein X is an aromatic group.

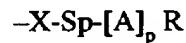
Claim 7 (original): The modified pigment product of claim 2, wherein p is 1 to 50.

Claim 8 (original): The modified pigment product of claim 1, wherein said steric group comprises the formula:



wherein X comprises an arylene group or an alkylene group, Sp represents a spacer group, m is an integer of from 1 to 12, p is an integer from 1 to 500, and R is hydrogen or comprises an alkyl group or an aromatic group.

Claim 9 (original): The modified pigment product of claim 1, wherein said steric group comprises the formula:



wherein X is attached to the pigment and comprises at least an arylene group or at least an alkylene group; Sp represents a spacer group, A represents an alkylene oxide group of from about 1 to about 12 carbons; p represents an integer of from 1 to 500; and R represents hydrogen, a substituted or unsubstituted alkyl group or a substituted or unsubstituted aromatic group wherein A can be the same or different when p is greater than 1.

Claim 10 (original): The modified pigment product of claim 9, wherein X is an aromatic group.

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Claim 11 (original): The modified pigment product of claim 9, wherein X is substituted with at least one functional group.

Claim 12 (original): The modified pigment product of claim 9, wherein X is substituted with a carboxylic group or a sulfonate group.

Claim 13 (original): The modified pigment product of claim 9, wherein p is from 1 to 25.

Claim 14 (original): The modified pigment product of claim 9, wherein p is from 26 to 50.

Claim 15 (original): The modified pigment product of claim 9, wherein R is an aromatic group.

Claim 16 (original): The modified pigment product of claim 9, wherein m is 2, p is 44-45, R is a methyl group, and X is a benzoyl group.

Claim 17 (original): The modified pigment product of claim 9, wherein m is 2, p is 22, R is a methyl group, and X is a benzoyl group.

Claim 18 (original): The modified pigment product of claim 9, wherein m is 2, p is 44-45, R is hydrogen, and X is a benzoyl group.

Claim 19 (original): The modified pigment product of claim 9, wherein m is 2, p is 7, R is a methyl group, and X is a benzoyl group.

Claim 20 (original): The modified pigment product of claim 1, wherein said steric group comprises the formula:

-X-Sp-[polymer]R,

wherein X is attached to the pigment and comprises at least an arylene group or at least an alkylene group; Sp represents a spacer group, "polymer" comprises repeating

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monomer groups or multiple monomer groups or both, optionally having at least one -X' group; R represents hydrogen, a bond, or comprises at least an alkyl group or at least an aromatic group; wherein X' comprises at least an aromatic group or at least an alkyl group, and each X' and X can be the same or different; and the total amount of monomer groups that comprise "polymer" is not greater than about 500 monomer repeating units, and when R represents a bond, R optionally bonds to said pigment.

Claim 21 (original): An ink composition comprising a) at least one liquid vehicle; b) at least one modified pigment product of claim 1.

Claim 22 (original): The ink composition of claim 21, wherein said liquid vehicle is aqueous.

Claim 23 (original): The ink composition of claim 21, wherein said liquid vehicle is non-aqueous.

Claim 24 (original): The ink composition of claim 21, wherein said ink composition is an inkjet ink composition.

Claim 25 (original): The ink composition of claim 21, further comprising at least one humectant, at least one binder, at least one dye, at least one biocide, at least one penetrant, at least one surfactant, or combinations thereof.

Claim 26 (original): The ink composition of claim 21, wherein said pigment is carbon black, graphite, vitreous carbon, finely-divided carbon, activated carbon, activated charcoal, or mixtures thereof.

Claim 27 (original): The ink composition of claim 21, wherein said pigment is carbon black.

Claim 28 (cancelled)

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Claim 29 (original): A printing plate comprising: a substrate, a protective layer located onto said substrate, and an infrared or near-infrared radiation-absorptive layer located on said protective layer, wherein said radiation-absorptive layer comprises at least one modified pigment of claim 1.

Claim 30 (original): A method of imaging a lithographic printing plate of claim 29, comprising selectively exposing the plate to a laser output in a pattern representing an image to selectively remove or chemically modify at least the radiation-absorptive layer defining the pattern.

Claim 31 (original): The method of claim 29, further comprising subjecting the plate to a solvent capable of removing portions of the imaged layer(s) defining the pattern.